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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

*Ex parte HELEN O'HARA,
DAVID STOWE, and DAVID EDWIN YATES*

Appeal 2010-001147
Application 09/938,649
Technology Center 1700

Before CHARLES F. WARREN, PETER F. KRATZ, and
LINDA M. GAUDETTE, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Applicants appeal to the Board from the decision of the Primary Examiner finally rejecting claims 60-78 in the Office Action mailed April 11, 2008. 35 U.S.C. §§ 6 and 134(a) (2008); 37 C.F.R. § 41.31(a) (2008).

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

An oral hearing was held July 21, 2010.

We reverse the decision of the Primary Examiner.

Claim 60 illustrates Appellants' invention of a method of forming a gassed emulsion explosive composition, and is representative of the claims on appeal:

60. A method of forming a gassed emulsion explosive composition comprising:

(a) forming a gasser solution comprising a solution of an inorganic nitrite, an ammonium species and optionally an accelerator;

(b) adding the gasser solution to an emulsion explosive composition having a discontinuous aqueous phase comprising inorganic oxygen releasing salts, a continuous water immiscible organic phase and a poly[alk(en)yl] succinic anhydride based emulsifier such that droplets of gasser composition are distributed throughout the emulsion explosive composition; and

(c) allowing the inorganic nitrite and the ammonium species of the gasser solution to react and form gas which is distributed as bubbles throughout the emulsion to form the gassed emulsion explosive composition;

wherein the gasser solution is formed during or immediately before addition of the gasser solution to the emulsion explosive composition by mixing the inorganic nitrite, ammonium species and optionally the accelerator, and wherein the reaction between the inorganic nitrite and the ammonium species occurs within the droplets of the gasser solution such that there is substantially no chemical attack on the emulsifier.

Appellants request review of the ground of rejection under 35 U.S.C. § 102(b) or, in the alternative, under 35 U.S.C. § 103(a), advanced on appeal

by the Examiner: claims 60-78 over McKenzie (US 5,076,867). App. Br. 4;² Ans. 3.

Opinion

We determine that claim 60 specifies a method comprising at least the steps of, among other things, forming a gasser solution comprising at least a solution of an inorganic nitrite, an ammonium species, which can be ammonium nitrate, and optionally, an accelerator either during or immediately before addition thereof to an emulsion explosive composition. The emulsion explosive composition is specified as having at least a discontinuous aqueous phase comprising at least inorganic oxygen releasing salts, which can be ammonium nitrate, a continuous water immiscible organic phase, and a particular succinic anhydride based emulsifier. The gasser solution is distributed as droplets within the emulsion explosive composition such that the inorganic nitrite and the ammonium species react within the droplets to form bubbles in the emulsion without substantially chemically attacking the emulsifier. *See Spec.*, e.g., ¶¶ 0017, 0020-0022, 0024, 0030, 0032, 0034, 0037-0039, and 0043.

With respect to the ground of rejection under § 102(b), Appellants submit that the Examiner erred in finding that McKenzie would have described to one of ordinary skill in the art a method falling within claim 60. App. Br. 6-7; Reply Br. 2-3. The Examiner relies on column 4, lines 30-68, of McKenzie as describing methods falling within claim 60. Ans. 3-4.

We agree with Appellants' finding that McKenzie would have described a conventional method in which a nitrite gassing agent is added to

² We considered the Appeal Brief filed May 13, 2009.

an emulsion explosion composition formed from an aqueous solution containing oxidizer salts and other aqueous ingredients, including a gassing accelerator, and a solution of an emulsifier and an immiscible liquid organic fuel. App. Br. 6-7, citing McKenzie col. 4, ll. 30-68; Reply Br. 2-3, citing McKenzie col. 4, l. 33 to col. 5, l. 16. In this respect, we find that McKenzie teaches that “[w]hen gassing is desired, which could be immediately after the emulsion is formed or up to several months thereafter

. . . the gassing agent and other advantageous trace additives are added and mixed homogeneously throughout the emulsion to produce uniform gassing at the desired rate.” McKenzie col. 5, ll. 1-8. We further find that in addition to the conventional method, McKenzie discloses that “[a] sodium nitrite/thiourea combination begins producing gas bubbles immediately upon addition of the nitrite to the oxidizer solution containing the thiourea.”

McKenzie col. 4, ll. 36-39. Thus, the portion of McKenzie at issue would have described to one of ordinary skill in this art that the order of addition of the nitrite is (1) to the oxidizer solution containing the oxygen releasing salt which solution is then used to form the emulsion explosion composition, or (2) to the formed emulsion explosion composition via an aqueous solution which does not contain the oxygen releasing salt.

Accordingly, on this record, we agree with Appellants that the Examiner has not established as a matter of fact that the methods described by McKenzie fall within claim 60. Ans. 3-4. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997), and cases cited therein.

Thus, in the absences of a prima facie case of anticipation, we reverse the ground of rejection of claims 60-78 under 35 U.S.C. § 102(b).

With respect to the ground of rejection under § 103(a), Appellants contend the Examiner erred in contending that one of ordinary skill in the art would have changed the order of steps taught by McKenzie without considering the claim requirement that a gasser solution of a nitrite and an ammonium species is added to an emulsion explosive composition such that a chemical gassing reaction occurs in the droplets of the gasser solution distributed within the emulsion, thus preventing substantial attack on the emulsifier by the nitrite. Appellants again point out that McKenzie does not disclose mixing a solution of nitrite and an ammonium species to form a gasser solution and then adding the solution to an emulsion explosive composition as claimed. App. Br. 11; Reply Br. 4-5.

On this record, we again agree with Appellants. It is within the ordinary skill in the art to vary the order of steps in a method taught in a reference. However, the Examiner does not explain how one of ordinary skill in the art would have changed the order steps of McKenzie's described methods of adding a gassing agent to an emulsion explosion composition when such methods do not include the steps of forming an aqueous solution of nitrite and ammonium species and adding such a solution to a formed emulsion explosion composition. Ans. 3 and 4-5.

Accordingly, in the absences of a prima facie case of obviousness, we reverse the ground of rejection of claims 60-78 under 35 U.S.C. § 103(a).

The Primary Examiner's decision is reversed.

REVERSED

Appeal 2010-001147
Application 09/938,649

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